

by administration of succinylcholine, halothane, or other halogenated anesthetics.³ This is a heterogeneous syndrome sometimes seen as a dominant trait in families with little clinical evidence of muscle disease, but also occurring in a variety of other neuromuscular disorders as well as in Landrace pigs. Administration of the offending agent produces intense muscular rigidity, hyperpyrexia (presumably from the heat of muscular contraction), acidosis, and muscle breakdown with its consequences of hyperkalemia, myoglob-inuria, and raised serum enzymes.

3. Finally, a few patients have been found to have pronounced slowing of muscular relaxation without resting stiffness; their muscles are electrically silent during the slow relaxation, a fact that distinguishes this problem from myotonia, and there is no defect in lactic acid production. In one patient,⁴ *in vitro* assay of the ability of fragmented sarcoplasmic reticulum to accumulate calcium was considerably reduced, and the clinical disorder was attributed to this defect of the relaxing mechanism, but similar studies have not been reported in other patients with this syndrome.

None of these conditions feature prolonged muscular stiffness; the contracture is a transient event. In the case of the child with ventilatory insufficiency who is the subject of the Specialty Conference, we seem to be dealing with still another disorder. The contracture was said to be limited mainly to the abdominal and thoracic muscles and it persisted for many months, although later it appears that there was muscular "bulging" in the arms and legs with an awkward gait, so that the problem may have been more generalized. Electrical stimulation evoked no response in the shortened muscles but gave normal results elsewhere, implying a failure of the muscle action potential in the affected muscles. Without more information, it is difficult to speculate about the mechanism of muscular contracture in this patient. In the laboratory, contracture can be produced in several ways. Bathing a muscle in a caffeine solution causes contracture by inducing liberation of the calcium that is stored in the longitudinal sarcoplasmic reticulum (SR); the raised cytoplasmic concentration of ionized calcium triggers the chemical interaction of actin and myosin, and tension develops. This is similar to the normal process of contraction, but caffeine substitutes for the action

potential as the stimulus releasing calcium, and the drug prevents the SR from re-accumulating calcium as it normally does after the electrical events cease. Contracture can also be produced by chemicals such as iodoacetate and dinitro-fluorobenzene, which prevent the cellular synthesis of adenosine triphosphate (ATP); electrical stimulation of the poisoned muscle gradually causes the ATP content to fall until calcium is released from the SR, and rigor appears. A similar mechanism may operate in McArdle's disease. There is, however, no laboratory model for contracture that persists indefinitely in living muscle, and it is hard to envisage *active* shortening lasting for many months; even rigor mortis comes to an end when the contractile proteins disintegrate. A more detailed report of the clinical features of the Stanford case would be welcome, and any future physiological studies will be of great interest; so far the case is intriguing, but more puzzling than instructive. A trial of therapy with intravenous procaine might be given, since it appears to counteract contracture in malignant hyperpyrexia.

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REFERENCES

1. Layzer RB, Rowland LP: Cramps. *N Engl J Med* 285:31, 1971
2. Taylor RG, Layzer RB, Fowler WM. Continuous muscle fiber activity in the Schwartz-Jampel syndrome. In preparation
3. Kalow W, Britt BA, Terreau ME, et al: Metabolic error of muscle metabolism after recovery from malignant hyperthermia. *Lancet* 2: 895, 1970
4. Brody IA: Muscle contracture induced by exercise—A syndrome attributable to decreased relaxing factor. *N Engl J Med* 281:187, 1969

Physicians and Decisions in Health Care

THERE ARE MANY WHO SAY that health care and medical care are much too important to be left to the doctors, and it appears that this attitude has been gaining ground. There are a number of reasons for such utterances. For one thing, medical care has become something worth having, and therefore worth more to more people.

For another, it has become much more complex and expensive, and this has progressively involved a great variety of health professionals and third parties of various kinds in many aspects of medical and health care. Physicians and the medical profession as a whole have of necessity delegated many decision-making responsibilities to other professionals and in the course of time have surrendered or abandoned many more. The result of all this is that many decisions affecting patient care and the delivery of services are now being made without physician participation, often by persons or parties seeking greater power and more decision-making responsibility.

Among those who seek or assume greater sway in the making of such decisions are many in allied health professions. The trend toward separate licensure for many of these gives rise to the likelihood that a variety of professionals with quite different levels of training and competence will soon be authorized to perform identical services. Multiple levels of quality in patient care and greater fractionation will be an inevitable result of this. In the delivery of medical services there are many more kinds of decision makers and their interests are apt to be more concerned with overcoming barriers to access or continuity of care, or providing more services at less cost, or with prevention, in the illusory hope that health care costs can be significantly improved if preventive measures are effectively used. Those with interests such as these have tended to focus their decision-making more upon the needs of the system as such than upon what individual patients need and want, and to be governed by broad social or economic considerations.

In the area of overall responsibility for health care there are many others who aspire to power and decision-making responsibility. Physicians and other providers have either abrogated their decision-making responsibilities or were pushed aside, depending upon one's view of it. Social workers, social scientists, public health professionals, those who pay the bills and even educators have all been trying their hand. So far none have succeeded. More recently, and in a kind of desperation, society and its government appear to have turned to the consumer, the user of services, hoping that his natural wisdom and closeness to the need will somehow find the so-

lutions. But while consumers have made important contributions, it is becoming evident that they too really lack the skills, knowledge, experience and expertise to solve the problems. And the politicians who have the most power of all have tried, and most would agree that their track record so far in health care has been quite unsatisfactory in that their legislation has too often created more problems than it has solved.

Out of all this there may be some lessons to be learned. Perhaps most important is that none of these groups, including the medical profession, have been able to solve the problems of health care alone, no matter how hard they have tried or how much power they have. The problems of health care are unlikely to be solved without real participation and collaboration among all these groups. This light is only just beginning to dawn. All those properly concerned must be represented in the planning, decision-making and evaluation processes in medical and health care. Only as this light grows brighter, and physicians, the medical profession, other professionals, social scientists, economists, payors, public health workers, politicians and consumers begin to recognize their various roles and responsibilities, will there be real progress. As this is done, and as those who must carry out or use or finance a plan or program participate somehow in forming, operating and evaluating it, it will become their program and they will be for it, not against it, and they will have a stake in its success. This too is a lesson to be learned.

The Sixth Progress Report of the Committee on the Role of Medicine in Society, published elsewhere in this issue, makes the point that physicians and the medical profession must become competent and prepared to participate in decision-making at all levels of health care. Seldom will they be making the decisions alone. But without participation by physicians and the medical profession, the decisions reached may often if not usually lack the realism or validity essential for success. Experience has shown this to be true. Medical care and health care may be too important to be left to the doctors, but by the same token doctors cannot safely be excluded from the decision-making processes. This is a lesson to be learned by both medicine and society.

—MSMW